

# SEQUENCE LISTING

<110> Bernard Pau  
 <120> Specific antibodies for diagnosing heart failure  
 <130> P70365US0  
 <140> US 10/523,400  
 <141> 2005-02-03  
 <150> PCT/FR03/02483  
 <151> 2003-08-07  
 <150> FR 0210063  
 <151> 2002-08-07  
 <160> 124  
 <170> PatentIn version 3.1  
 <210> 1  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens : proBNP(1-108)

<400> 1

His Pro Leu Gly Ser Pro Gly Ser Ala Ser Asp Leu Glu Thr Ser Gly  
 1 5 10 15

Leu Gln Glu Gln Arg Asn His Leu Gln Gly Lys Leu Ser Glu Leu Gln  
 20 25 30

Val Glu Gln Thr Ser Leu Glu Pro Leu Gln Glu Ser Pro Arg Pro Thr  
 35 40 45

Gly Val Trp Lys Ser Arg Glu Val Ala Thr Glu Gly Ile Arg Gly His  
 50 55 60

Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg Ser Pro Lys Met  
 65 70 75 80

Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser Ser  
 85 90 95

Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His  
100 105

<210> 2  
<211> 32  
<212> PRT  
<213> Homo sapiens : proBNP(77-108)

<400> 2

Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp  
1 5 10 15

Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His  
20 25 30

<210> 3  
<211> 76  
<212> PRT  
<213> Homo sapiens : proBNP(1-76)

<400> 3

His Pro Leu Gly Ser Pro Gly Ser Ala Ser Asp Leu Glu Thr Ser Gly  
1 5 10 15

Leu Gln Glu Gln Arg Asn His Leu Gln Gly Lys Leu Ser Glu Leu Gln  
20 25 30

Val Glu Gln Thr Ser Leu Glu Pro Leu Gln Glu Ser Pro Arg Pro Thr  
35 40 45

Gly Val Trp Lys Ser Arg Glu Val Ala Thr Glu Gly Ile Arg Gly His  
50 55 60

Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg  
65 70 75

<210> 4  
<211> 16  
<212> PRT  
<213> Artificial Sequence : proBNP(70-85)

<220>  
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<222> (1)..(1)  
<223> Acetylation

<400> 4

Tyr Thr Leu Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly Ser Gly  
1 5 10 15

<210> 5  
<211> 6  
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<213> Artificial Sequence : proBNP(73-78)

<220>  
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<223> Acetylation

<400> 5

Arg Ala Pro Arg Ser Pro  
1 5

<210> 6  
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<223> Acetylation

<400> 6

Cys Gly Arg Ala Pro Arg Ser Pro  
1 5

<210> 7  
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<222> (1)..(1)  
<223> Acetylation

<400> 7

Cys Gly Arg Ala Pro Arg Ser Pro  
1 5

<210> 8

<211> 9

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 8

Cys Gly Arg Ala Pro Arg Ser Pro Lys  
1 5

<210> 9

<211> 9

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 9

Cys Gly Arg Ala Pro Arg Ser Pro Lys  
1 5

<210> 10

<211> 11

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 10

Cys Gly Arg Ala Pro Arg Ser Pro Lys Met Val  
1 5 10

<210> 11

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 11

Cys Gly Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly Ser Gly  
1 5 10 15

<210> 12

<211> 8

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 12

Arg Ala Pro Arg Ser Pro Gly Cys  
1 5

<210> 13

<211> 8

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 13

Arg Ala Pro Arg Ser Pro Gly Cys  
1 5

<210> 14

<211> 11

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 14

Cys Tyr Thr Leu Arg Ala Pro Arg Ser Pro Lys  
1 5 10

<210> 15

<211> 17

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)  
<223> Acetylation

<400> 15

Cys	His	Arg	Lys	Met	Val	Leu	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro
1				5					10					15	

Lys

<210> 16  
<211> 17  
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<222> (1)..(1)  
<223> Acetylation

<400> 16

Cys	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser
1				5					10					15	

Gly

<210> 17  
<211> 17  
<212> PRT  
<213> Artificial Sequence : peptide

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<222> (1)..(1)  
<223> Acetylation

<400> 17

Cys Phe Thr Leu Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly Ser  
1 5 10 15

Gly

<210> 18

<211> 17

<212> PRT

<213> Artificial Sequence : peptide

<220>  
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<222> (1)..(1)  
<223> Acetylation

<400> 18

Cys Phe Ser Ile Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly Ser  
1 5 10 15

Gly

<210> 19

<211> 17

<212> PRT

<213> Artificial Sequence : peptide

<220>



<221> MOD\_RES

<222> (17)..(17)

<223> bAla

<400> 19

Cys	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser
1				5					10					15	

Ala

<210> 20

<211> 17

<212> PRT

<213> Artificial Sequence : peptide

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<222> (17)..(17)

<223> bAla

<400> 20

Cys	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Ala	Thr
1				5					10					15	

Ala

<210> 21

<211> 17

<212> PRT

<213> Artificial Sequence : peptide

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<222> (17)..(17)

<223> bAla

<400> 21

Cys	Phe	Ser	Ile	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Ala	Thr
1				5					10					15	

Ala

<210> 22

<211> 17

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 22

Cys	Phe	Ser	Ile	Arg	Ala	Pro	Arg	Ser	Pro	Ala	Leu	Ala	Ser	Gly	Thr
1				5					10					15	

Ala

<210> 23

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 23

His	Pro	Leu	Gly	Ser	Pro	Gly	Ser	Ala	Ser	Asp	Leu	Glu	Thr	Ser
1				5					10					15

<210> 24

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 24

Gly	Ser	Pro	Gly	Ser	Ala	Ser	Asp	Leu	Glu	Thr	Ser	Gly	Leu	Gln
1				5					10					15

<210> 25

<211> 15

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<222> (1)..(1)

<223> Acetylation

<400> 25

Gly Ser Ala Ser Asp Leu Glu Thr Ser Gly Leu Gln Glu Gln Arg  
1 5 10 15

<210> 26

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 26

Ser Asp Leu Glu Thr Ser Gly Leu Gln Glu Gln Arg Asn His Leu  
1 5 10 15

<210> 27

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 27

Glu Thr Ser Gly Leu Gln Glu Gln Arg Asn His Leu Gln Gly Lys  
1 5 10 15

<210> 28

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 28

Gly	Leu	Gln	Glu	Gln	Arg	Asn	His	Leu	Gln	Gly	Lys	Leu	Ser	Glu
1				5					10					15

<210> 29

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 29

Glu	Gln	Arg	Asn	His	Leu	Gln	Gly	Lys	Leu	Ser	Glu	Leu	Gln	Val
1				5					10					15

<210> 30

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 30

Asn His Leu Gln Gly Lys Leu Ser Glu Leu Gln Val Glu Gln Thr  
1 5 10 15

<210> 31

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 31

Gln Gly Lys Leu Ser Glu Leu Gln Val Glu Gln Thr Ser Leu Glu  
1 5 10 15

<210> 32

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

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<222> (1)..(1)

<223> Acetylation

<400> 32

Leu Ser Glu Leu Gln Val Glu Gln Thr Ser Leu Glu Pro Leu Gln  
1 5 10 15

<210> 33

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

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<222> (1)..(1)

<223> Acetylation

<400> 33

Leu	Gln	Val	Glu	Gln	Thr	Ser	Leu	Glu	Pro	Leu	Gln	Glu	Ser	Pro
1				5					10					15

<210> 34

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 34

Glu	Gln	Thr	Ser	Leu	Glu	Pro	Leu	Gln	Glu	Ser	Pro	Arg	Pro	Thr
1				5					10					15

<210> 35

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 35

Ser Leu Glu Pro Leu Gln Glu Ser Pro Arg Pro Thr Gly Val Trp  
1 5 10 15

<210> 36

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 36

Pro Leu Gln Glu Ser Pro Arg Pro Thr Gly Val Trp Lys Ser Arg  
1 5 10 15

<210> 37

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 37

Glu Ser Pro Arg Pro Thr Gly Val Trp Lys Ser Arg Glu Val Ala  
1 5 10 15

<210> 38

<211> 15

<212> PRT

<213> Artificial Sequence : peptide



<220>  
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<222> (1)..(1)  
<223> Acetylation

<400> 38

Arg Pro Thr Gly Val Trp Lys Ser Arg Glu Val Ala Thr Glu Gly  
1 5 10 15

<210> 39

<211> 15

<212> PRT

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<223> Acetylation

<400> 39

Gly Val Trp Lys Ser Arg Glu Val Ala Thr Glu Gly Ile Arg Gly  
1 5 10 15

<210> 40

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<223> Acetylation

<400> 40

Lys Ser Arg Glu Val Ala Thr Glu Gly Ile Arg Gly His Arg Lys  
1 5 10 15

<210> 41

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 41

Glu	Val	Ala	Thr	Glu	Gly	Ile	Arg	Gly	His	Arg	Lys	Met	Val	Leu
1				5				10						15

<210> 42

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 42

Thr	Glu	Gly	Ile	Arg	Gly	His	Arg	Lys	Met	Val	Leu	Tyr	Thr	Leu
1				5				10						15

<210> 43

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

<221> MOD\_RES

<222> (1)..(1)  
<223> Acetylation

<400> 43

Ile	Arg	Gly	His	Arg	Lys	Met	Val	Leu	Tyr	Thr	Leu	Arg	Ala	Pro
1				5					10					15

<210> 44

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> Acetylation

<400> 44

His	Arg	Lys	Met	Val	Leu	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro
1				5					10					15

<210> 45

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> Acetylation

<400> 45

Met	Val	Leu	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val
1				5					10					15

<210> 46

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 46

Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser
1				5					10					15

<210> 47

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 47

Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser	Gly	Cys	Phe
1				5					10					15

<210> 48

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 48

Arg Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys  
1 5 10 15

<210> 49

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

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<222> (1)..(1)

<223> Acetylation

<400> 49

Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp Arg  
1 5 10 15

<210> 50

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

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<222> (1)..(1)

<223> Acetylation

<400> 50

Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser Ser  
1 5 10 15

<210> 51

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 51

Gly	Cys	Phe	Gly	Arg	Lys	Met	Asp	Arg	Ile	Ser	Ser	Ser	Ser	Gly
1				5					10					15

<210> 52

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 52

Gly	Arg	Lys	Met	Asp	Arg	Ile	Ser	Ser	Ser	Ser	Gly	Leu	Gly	Cys
1				5					10					15

<210> 53

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 53

Met Asp Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys Val Leu  
1 5 10 15

<210> 54

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 54

Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His  
1 5 10 15

<210> 55

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 55

Ala Thr Leu Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly Ser  
1 5 10 15

<210> 56

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

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<222> (1)..(1)

<223> Acetylation

<400> 56

Tyr	Ala	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser
1				5					10					15

<210> 57

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 57

Tyr	Thr	Ala	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser
1				5					10					15

<210> 58

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 58



Tyr Thr Leu Ala Ala Pro Arg Ser Pro Lys Met Val Gln Gly Ser  
1 5 10 15

<210> 59

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 59

Tyr Thr Leu Arg Gly Pro Arg Ser Pro Lys Met Val Gln Gly Ser  
1 5 10 15

<210> 60

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 60

Tyr Thr Leu Arg Ala Ala Arg Ser Pro Lys Met Val Gln Gly Ser  
1 5 10 15

<210> 61

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)  
<223> Acetylation

<400> 61

Tyr	Thr	Leu	Arg	Ala	Pro	Ala	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser
1				5					10					15

<210> 62

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> Acetylation

<400> 62

Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ala	Pro	Lys	Met	Val	Gln	Gly	Ser
1				5					10					15

<210> 63

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> Acetylation

<400> 63

Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Ala	Lys	Met	Val	Gln	Gly	Ser
1				5					10					15

<210> 64

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 64

Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Ala	Met	Val	Gln	Gly	Ser
1				5					10					15

<210> 65

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 65

Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Ala	Val	Gln	Gly	Ser
1				5					10					15

<210> 66

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<221> MOD\_RES  
<222> (1)..(1)  
<223> Acetylation

<400> 66

Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Ala	Gln	Gly	Ser
1				5					10					15

<210> 67

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>  
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<222> (1)..(1)  
<223> Acetylation

<400> 67

Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Ala	Gly	Ser
1				5					10					15

<210> 68

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>  
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<222> (1)..(1)  
<223> Acetylation

<400> 68

Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Ala	Ser
1				5					10					15

<210> 69

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 69

Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ala
1				5					10					15

<210> 70

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 70

Pro	Leu	Gly	Ser	Pro	Gly	Ser	Ala	Ser	Asp	Leu	Glu	Thr	Ser	Gly
1				5					10					15

<210> 71

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 71

Leu	Gly	Ser	Pro	Gly	Ser	Ala	Ser	Asp	Leu	Glu	Thr	Ser	Gly	Leu
1				5					10					15

<210> 72

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 72

Ser	Pro	Gly	Ser	Ala	Ser	Asp	Leu	Glu	Thr	Ser	Gly	Leu	Gln	Glu
1				5				10						15

<210> 73

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 73

Pro	Gly	Ser	Ala	Ser	Asp	Leu	Glu	Thr	Ser	Gly	Leu	Gln	Glu	Gln
1				5				10						15

<210> 74

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 74

Ser	Ala	Ser	Asp	Leu	Glu	Thr	Ser	Gly	Leu	Gln	Glu	Gln	Arg	Asn
1				5					10					15

<210> 75

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 75

Ala	Ser	Asp	Leu	Glu	Thr	Ser	Gly	Leu	Gln	Glu	Gln	Arg	Asn	His
1				5					10					15

<210> 76

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 76

Ser	Asp	Leu	Glu	Thr	Ser	Gly	Leu	Gln	Glu	Gln	Arg	Asn	His	Leu
1				5					10					15

<210> 77

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 77

Asp	Leu	Glu	Thr	Ser	Gly	Leu	Gln	Glu	Gln	Arg	Asn	His	Leu	Gln
1				5					10					15

<210> 78

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 78

Leu	Glu	Thr	Ser	Gly	Leu	Gln	Glu	Gln	Arg	Asn	His	Leu	Gln	Gly
1				5					10					15

<210> 79

<211> 15



<212> PRT

<213> Artificial Sequence : peptide

<220>

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<222> (1)..(1)

<223> Acetylation

<400> 79

Leu	Gln	Glu	Gln	Arg	Asn	His	Leu	Gln	Gly	Lys	Leu	Ser	Glu	Leu
1				5					10					15

<210> 80

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 80

Gln	Glu	Gln	Arg	Asn	His	Leu	Gln	Gly	Lys	Leu	Ser	Glu	Leu	Gln
1				5					10					15

<210> 81

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 81

Gln	Arg	Asn	His	Leu	Gln	Gly	Lys	Leu	Ser	Glu	Leu	Gln	Val	Glu
1				5					10					15

<210> 82

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 82

Arg	Asn	His	Leu	Gln	Gly	Lys	Leu	Ser	Glu	Leu	Gln	Val	Glu	Gln
1				5					10					15

<210> 83

<211> 15

<212> PRT

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<222> (1)..(1)

<223> Acetylation

<400> 83

His	Leu	Gln	Gly	Lys	Leu	Ser	Glu	Leu	Gln	Val	Glu	Gln	Thr	Ser
1				5					10					15

<210> 84

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 84

Leu	Gln	Gly	Lys	Leu	Ser	Glu	Leu	Gln	Val	Glu	Gln	Thr	Ser	Leu
1				5					10					15

<210> 85

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 85

Gln	Gly	Lys	Leu	Ser	Glu	Leu	Gln	Val	Glu	Gln	Thr	Ser	Leu	Glu
1				5					10					15

<210> 86

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 86

Gly	Lys	Leu	Ser	Glu	Leu	Gln	Val	Glu	Gln	Thr	Ser	Leu	Glu	Pro
1				5				10						15

<210> 87

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 87

Lys	Leu	Ser	Glu	Leu	Gln	Val	Glu	Gln	Thr	Ser	Leu	Glu	Pro	Leu
1				5				10						15

<210> 88

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 88

Leu	Glu	Pro	Leu	Gln	Glu	Ser	Pro	Arg	Pro	Thr	Gly	Val	Trp	Lys
1				5				10						15

<210> 89

<211> 15

<212> PRT

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<222> (1)..(1)  
<223> Acetylation

<400> 89

Glu	Pro	Leu	Gln	Glu	Ser	Pro	Arg	Pro	Thr	Gly	Val	Trp	Lys	Ser
1				5					10					15

<210> 90

<211> 15

<212> PRT

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<222> (1)..(1)  
<223> Acetylation

<400> 90

Pro	Leu	Gln	Glu	Ser	Pro	Arg	Pro	Thr	Gly	Val	Trp	Lys	Ser	Arg
1				5					10					15

<210> 91

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<223> Acetylation

<400> 91

Leu	Gln	Glu	Ser	Pro	Arg	Pro	Thr	Gly	Val	Trp	Lys	Ser	Arg	Glu
1				5					10					15

37

<210> 92

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 92

Gln	Glu	Ser	Pro	Arg	Pro	Thr	Gly	Val	Trp	Lys	Ser	Arg	Glu	Val
1				5					10				15	

<210> 93

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)

<223> Acetylation

<400> 93

Glu	Ser	Pro	Arg	Pro	Thr	Gly	Val	Trp	Lys	Ser	Arg	Glu	Val	Ala
1				5					10				15	

<210> 94

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>  
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<222> (1)..(1)  
<223> Acetylation

<400> 94

Ser	Pro	Arg	Pro	Thr	Gly	Val	Trp	Lys	Ser	Arg	Glu	Val	Ala	Thr
1				5				10						15

<210> 95

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)  
<223> Acetylation

<400> 95

Pro	Arg	Pro	Thr	Gly	Val	Trp	Lys	Ser	Arg	Glu	Val	Ala	Thr	Glu
1				5				10						15

<210> 96

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<222> (1)..(1)  
<223> Acetylation

<400> 96

Pro	Thr	Gly	Val	Trp	Lys	Ser	Arg	Glu	Val	Ala	Thr	Glu	Gly	Ile
1				5				10						15

<210> 97

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

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<222> (1)..(1)

<223> Acetylation

<400> 97

Thr	Gly	Val	Trp	Lys	Ser	Arg	Glu	Val	Ala	Thr	Glu	Gly	Ile	Arg
1				5					10					15

<210> 98

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

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<222> (1)..(1)

<223> Acetylation

<400> 98

Ile	Arg	Gly	His	Arg	Lys	Met	Val	Leu	Tyr	Thr	Leu	Arg	Ala	Pro
1				5					10					15

<210> 99

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

<221> MOD\_RES

<222> (1)..(1)



<223> Acetylation

<400> 99

Arg Gly His Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg  
1 5 10 15

<210> 100

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 100

Gly His Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg Ser  
1 5 10 15

<210> 101

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 101

Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg Ser Pro Lys  
1 5 10 15

<210> 102

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 102

Lys	Met	Val	Leu	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met
1				5					10				15	

<210> 103

<211> 15

<212> PRT

<213> Artificial Sequence : peptide

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<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 103

Val	Leu	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln
1				5					10				15	

<210> 104

<211> 35

<212> PRT

<213> Artificial Sequence : peptide

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> Acetylation

<400> 104

Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp  
1 5 10 15

Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His  
20 25 30

Lys Lys Lys  
35

<210> 105

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> misc\_feature

<223> peptide

<400> 105

Ser Pro Lys Met Val Gln Gly Ser Gly Cys  
1 5 10

<210> 106

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<221> misc\_feature

<223> peptide

<400> 106

Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg  
1 5 10

<210> 107

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<221> misc\_feature

<223> peptide

<400> 107

His Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg  
1 5 10

<210> 108

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<221> misc\_feature

<223> peptide

<400> 108

Tyr Thr Leu Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly Ser  
1 5 10 15

<210> 109

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<221> misc\_feature

<223> peptide

<400> 109

Cys	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser
1				5					10					15	

<210> 110

<211> 11

<212> PRT

<213> Artificial Sequence

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<221> misc\_feature

<223> peptide

<400> 110

Cys	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys
1				5					10	

<210> 111

<211> 13

<212> PRT

<213> Artificial Sequence

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<223> peptide

<400> 111

Cys	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val
1				5					10			

<210> 112

<211> 14

<212> PRT

<213> Artificial Sequence

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<223> peptide

<400> 112

Cys	Tyr	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln
1				5					10				

<210> 113

<211> 15

<212> PRT

<213> Artificial Sequence

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<223> peptide

<400> 113

Cys Tyr Thr Leu Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly  
1 5 10 15

<210> 114

<211> 13

<212> PRT

<213> Artificial Sequence

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<222> (1)..(1)

<223> Acetylation

<400> 114

Cys Thr Leu Arg Ala Pro Arg Ser Pro Lys Met Val Gln  
1 5 10

<210> 115

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> misc\_feature

<223> peptide

<400> 115

Cys Thr Leu Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly

1 5 10

<210> 116

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<221> misc\_feature

<223> peptide

<400> 116

Cys	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser
1				5					10					15

<210> 117

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<221> misc\_feature

<223> peptide

<400> 117

Cys	Thr	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser	Gly
1				5					10					15	

<210> 118

<211> 11



<212> PRT

<213> Artificial Sequence

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<221> misc\_feature

<223> peptide

<400> 118

Cys	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val
1				5					10	

<210> 119

<211> 12

<212> PRT

<213> Artificial Sequence

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<221> misc\_feature

<223> peptide

<400> 119

Cys	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln
1				5					10		

<210> 120

<211> 12

<212> PRT

<213> Artificial Sequence

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<221> misc\_feature

<223> peptide

<400> 120

Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Cys
1				5					10		

<210> 121

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> misc\_feature

<223> peptide

<400> 121

Cys	Leu	Arg	Ala	Pro	Arg	Ser	Pro	Lys	Met	Val	Gln	Gly	Ser
1				5					10				

<210> 122

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<221> misc\_feature

<223> peptide

Cys Leu Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly Ser Gly  
1 5 10 15

<211> 11

<213> Artificial Sequence

<221> misc feature

<223> peptide

Leu Gln Glu Gln Arg Asn His Leu Gln Gly Lys  
1 5 10

<211> 12

<213> Artificial Sequence

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<223> peptide

Leu Glu Pro Leu Gln Glu Ser Pro Arg Pro Thr Gly  
51

1

5

10